

STUDIES

ROLE OF GASTROINTESTINAL PARASITES IN URTICARIA

Srabani Ghosh, A J Kanwar, Sandipan Dhar, Surrinder Kaur

The role of gastrointestinal parasites as aetiological factor in chronic urticaria was evaluated in 300 patients. Fifty nine (19.66%) patients were detected to have intestinal parasites compared to 18% among the control group. The difference was statistically insignificant. No significant improvement was noted with specific treatment of helminthic infestation.

Key Words : Urticaria

Introduction

Presence of helminths or protozoa in gastrointestinal tract has often been incriminated as a cause of chronic urticaria.¹ Some reports suggest that treatment of the parasitic infestation results in improvement or resolution of the urticaria.² However, others have doubted the causal relationship and have reported negative results following specific treatment.^{3,4} The present study was designed to evaluate the role of gastrointestinal parasites in causation of chronic urticaria.

Material and Methods

Three hundred patients with chronic urticaria were included in the study. Patients in whom it was possible to establish the cause of urticaria were not included except those who were harbouring gastrointestinal parasites.

Stool examination was carried out in every patient on 3 consecutive days by

formol-ether concentration method for ova or cysts. A patient was considered to be free of gastrointestinal infestations only if the stool specimens contained no ova, cysts or parasites on 3 consecutive days.

Patients with gastrointestinal infestations were treated with appropriate therapeutic agents. After completion of the therapeutic regimen, examination of the stools was repeated on 3 consecutive days to confirm elimination of parasite (s).

Patients were asked to note the frequency and number of attacks, duration, and size of the lesions for upto 8 weeks following treatment. Antihistaminics were permitted only if required. The frequency and severity of attacks of urticaria occurring before treatment of gastrointestinal parasites was compared to the attacks following treatment.

One hundred patients of comparable age and sex attending the Dermatology out-patient department for other skin diseases served as controls. In these patients also, stool samples were examined for ova, cysts and parasites on 3 consecutive days.

From the Department of Dermatology, Venereology and Leprology, Postgraduate Institute of Medical Education and Research, Chandigarh - 160 012, India.

Address correspondence to : Dr Srabani Ghosh

Results

Of 300 patients included in the study, 180 (60%) were females while 120 (40%) were males, the male:female ratio being 2:3.

The mean duration of urticaria in patients harbouring gastrointestinal parasites was 21.8 months (range 2-120 months).

Fifty nine (19.66%) patients were detected to have ova, cysts and/or intestinal parasites including *Giardia lamblia*, *Entamoeba histolytica*, *Ascaris lumbricoides*, *Ankylostoma duodenale* and *Entamoeba coli*. Eighteen (18%) patients in the control group had ova/cysts or

Table I. Parasites in patients with urticaria and controls

Parasites	Urticaria patients (n=59)	Controls (n=18)
<i>Giardia lamblia</i>	32 (59.2%)	9 (50%)
<i>Entamoeba histolytica</i>	13 (22%)	3 (17%)
<i>Entamoeba coli</i>	0	2 (11%)
<i>Ascaris lumbricoides</i>	12 (20.3%)	2 (11%)
<i>Ankylostoma duodenale</i>	1 (1.6%)	2 (11%)
Miscellaneous	1 (1.6%)	0
Total	59	18

p value 0.05 $X^2 = 0.0134$

parasites atleast in 1 sample out of the 3 tested. The relative incidence of isolation of various parasites in patients of urticaria in comparison to the control group is shown in Table I.

It was observed that patients harbouring parasites had a relatively shorter duration of urticaria; the difference was however, not statistically significant (Table I).

All 59 (19.66%) patients who harboured intestinal parasites were treated with recommended doses of antihelmintics. Of these, 48 (81%) were available for follow-up for next 2 months. Repeat stool examinations after completion of treatment continued to show parasites in 3 (6.2%) patients (Table II). Following treatment, 9 (18.7%) patients reported decrease in intensity and/or severity of urticaria. Five (10.4%) patients had complete clearance of urticaria during subsequent 8 weeks follow-up, while 4 (8.3%) patients had recurrence of urticaria within 2-4 weeks of completion of treatment. Remaining 39 (81%) patients did not have improvement in the course of urticaria or it became worse; 8 patients required regular administration of antihistaminics.

Table II. Parasites in patients of urticaria and effect of treatment

Ova, cysts and parasites	Number of patients treated	Repeat samples +	Stool		Effect on urticaria		
			-	Improved	Transient	Nil	
<i>Giardia lamblia</i>	26	2	24	3	2	21	
<i>Entamoeba histolytica</i>	11	1	10	1	1	9	
<i>Ascaris lumbricoides</i>	9	0	9	1	0	8	
<i>Ankylostoma duodenale</i>	1	0	1	0	1	0	
<i>Iodamoeba</i>	1	1	0	0	0	1	
Total :	48	4	44	5	4	39	

Comments

The exact pathogenesis by which parasites may precipitate urticaria is not known.^{2,5} Whether urticaria occurs on the basis of immunologic reaction to antigen produced by the organisms or the infestation alters intestinal permeability which may facilitate antigen entry is not clear.²

The relationship between urticaria and gastrointestinal parasites is also not certain. Several authors have mentioned parasitic infestation of gastrointestinal tract as an important cause of urticaria,¹ and there are occasional case reports⁶ which mention clearance of urticaria following treatment of parasites with appropriate therapy. On the contrary, some other studies disprove the association between parasites and urticaria.^{3,4} In the present study, gastrointestinal parasites were detected in 19.66% cases compared to the control group in which the incidence was 18%. This was statistically insignificant.

Moreover effect of elimination of the parasites on the course of urticaria was frustrating. Pasricha et al³ found that

specific treatment of parasites led to total improvement in 8% and the number of attacks were lessened in another 8% of cases. Our results corroborate their findings.

Thus as suggested by Champion⁷ the association of gastrointestinal parasites with urticaria is a myth. Even when parasites are detected, their elimination does not lead to cure of urticaria.

References

1. Champion RH, Roberts SOB, Carpenter RG, et al. Urticaria angioedema: a review of 554 patients. *Br J Dermatol* 1969;81:488-97.
2. Veronesi S, Palmerio B, Negosaiti M. Urticaria and giardiasis. *Dermatologica* 1983;166:42-3.
3. Pasricha JS, Pasricha A, Prakash O. Role of gastrointestinal parasites in urticaria. *Ann Allergy* 1972;30:348-51.
4. Pasricha JS, Kanwar AJ. Survey of causes of urticaria. *Ind J Dermatol Venereol Leprol* 1979;45:6-12.
5. Weisman BL. Urticaria and Giardia lamblia infection. *Ann Allergy* 1979;42:91.
6. Clyne CA, George ME. Fever and urticaria in acute giardiasis. *Arch Intern Med* 1989;149:939-40.
7. Champion RH. Urticaria. then and now. *Br J Dermatol* 1988;119:427-36.